

FIG. 1  
(PRIOR ART)

100

```
<NAMES>
  <NAME>
    <LAST_NAME>105
    Erwin
  </LAST_NAME>110
  <FIRST_NAME>115
  Cody
  </FIRST_NAME>120
  <MIDDLE_INITIAL />125
</NAME>
<NAME>
  <LAST_NAME_SUFFIX = "Jr.">130
  Curtis
  </LAST_NAME>140
  <FIRST_NAME>
  John
  </FIRST_NAME>
  <MIDDLE_INITIAL />
</NAME>
</NAMES>
```

FIG. 2  
(PRIOR ART)

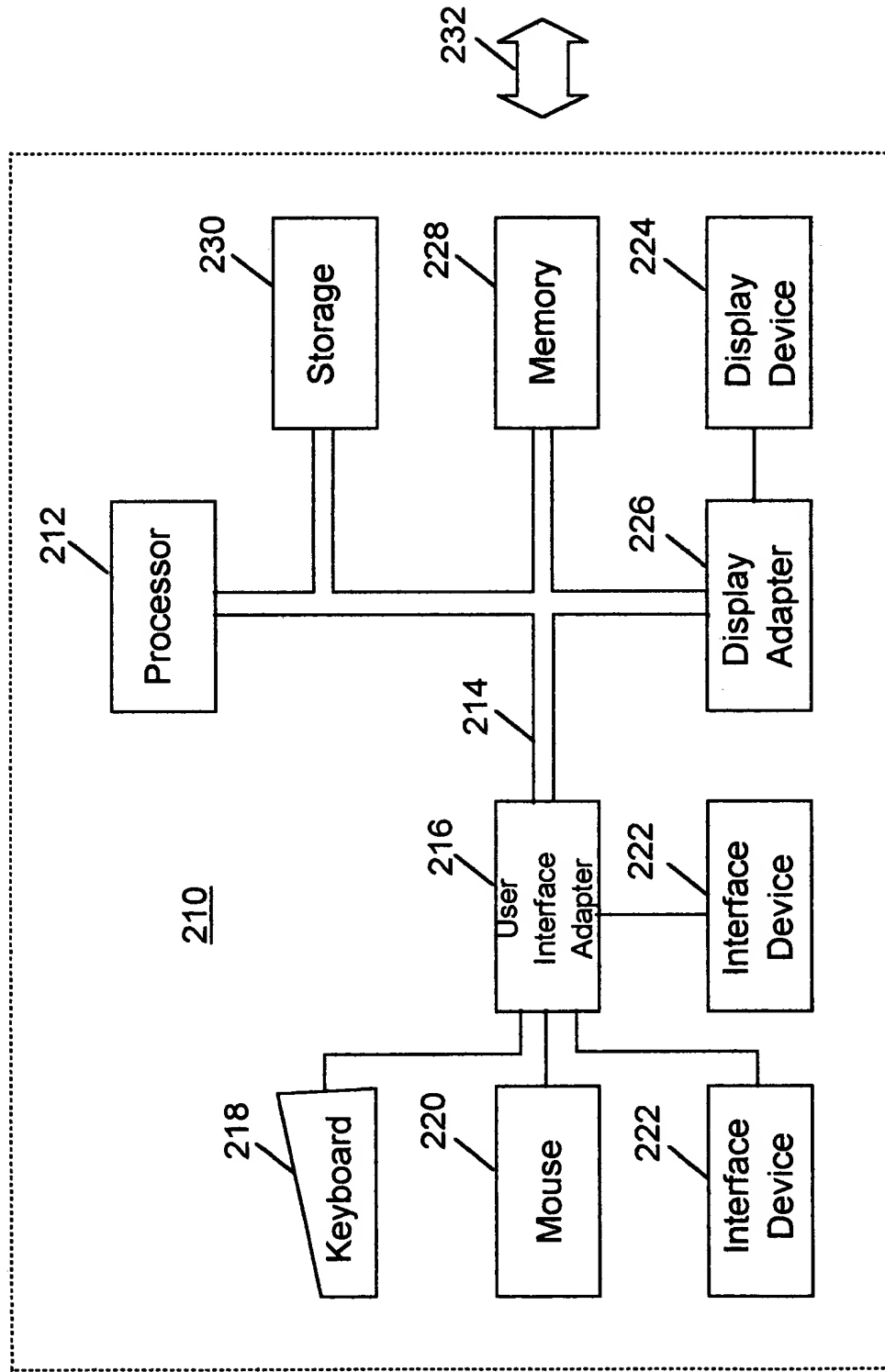


FIG. 3  
(PRIOR ART)

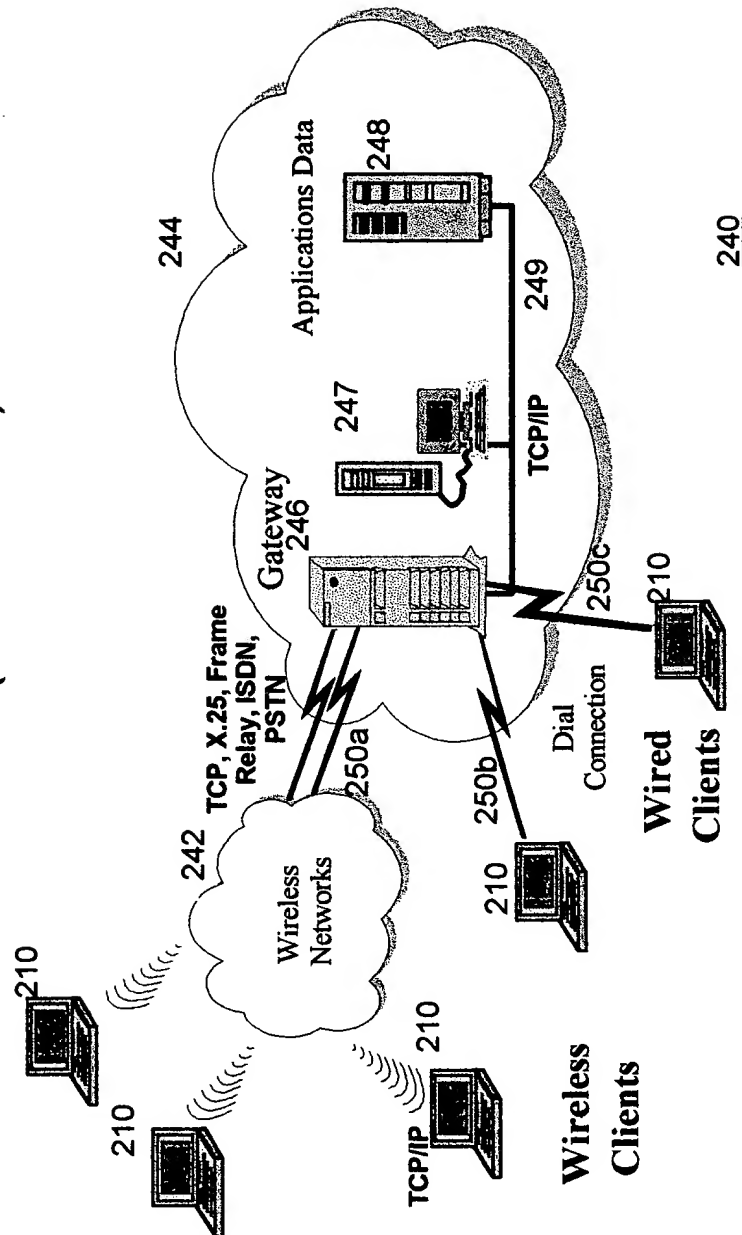


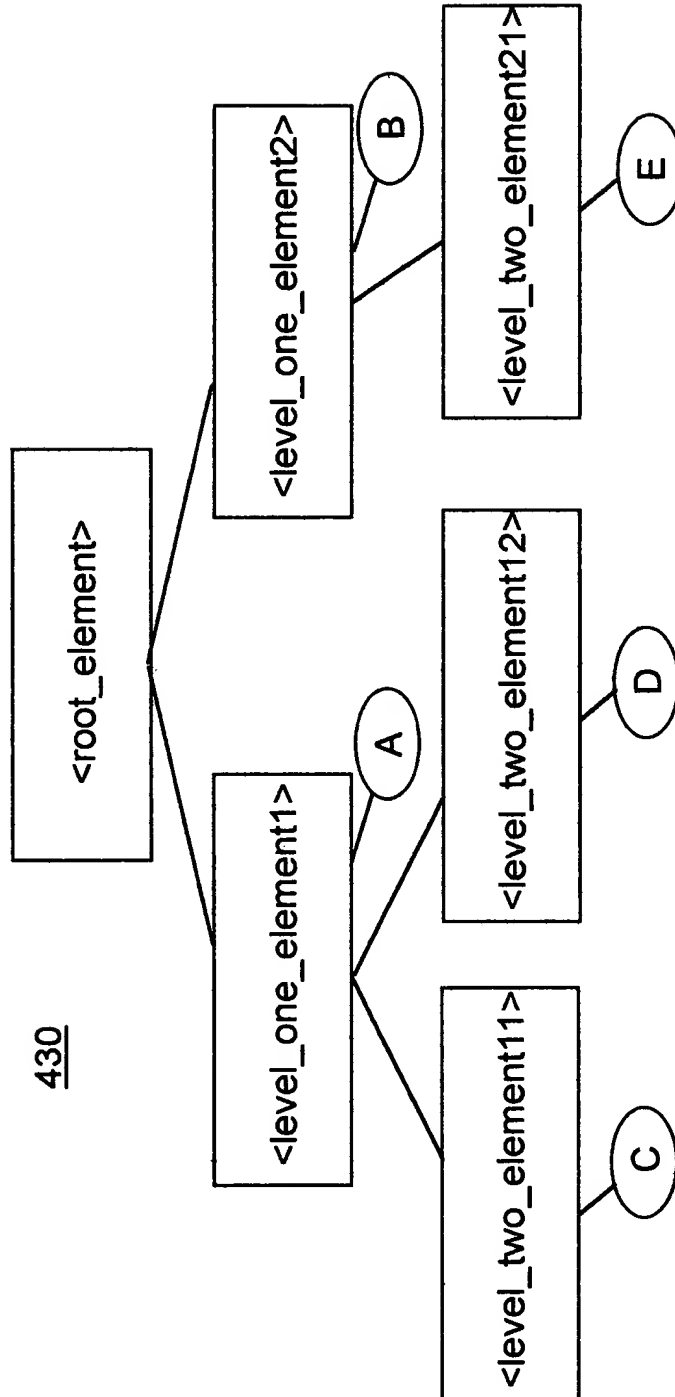
FIG. 4A  
(PRIOR ART)

400

```

402 <root_element>
    <level_one_element1 id="1" name="1">410
        A
        <level_two_element11> B </level_two_element11>412
        <level_two_element12> C </level_two_element12>414
    </level_one_element1>
    <level_one_element2 id="2" name="2">420
        D
        <level_two_element21> E </level_two_element21>422
    </level_one_element2>
</root_element>
    
```

430



037E33" 030E330

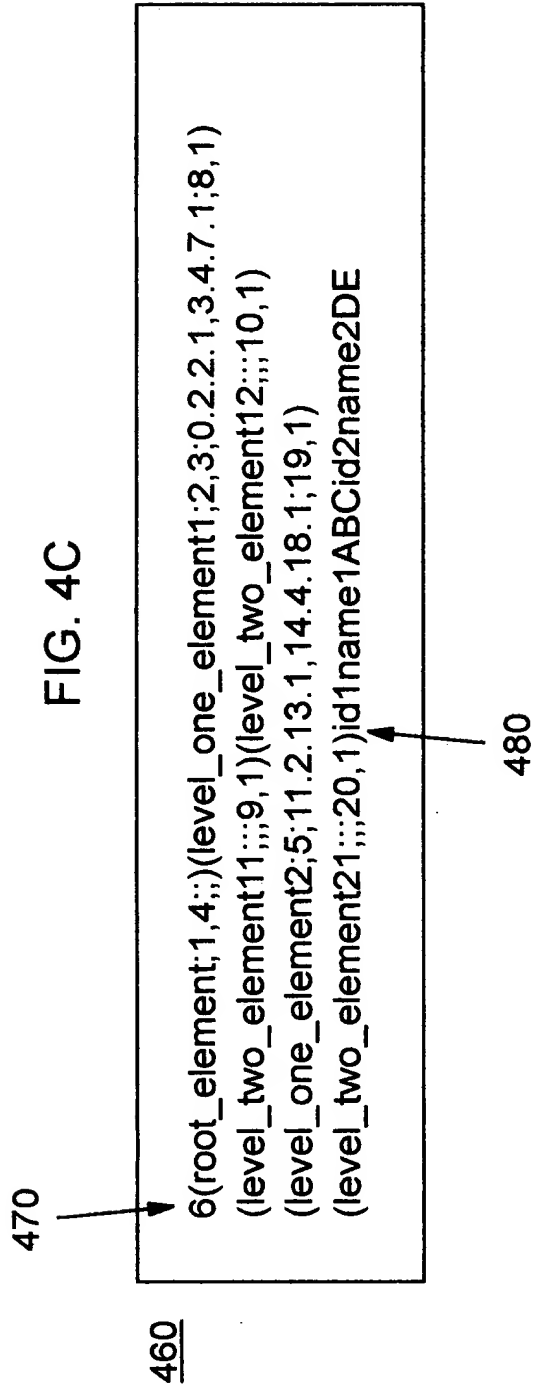


FIG. 5A

	0	1	2	3	4	5
	505	506	507	508		
501 start pointer	2	22	66	93	121	168
502 length	12	18	19	19	18	19
503 buffer pointer	B	B	B	B	B	B

points to buffer

**FIG. 5B**

	0	1	2	3	4	5
<sup>511</sup> start pointer	-1	8	9	10	19	20
<sup>512</sup> length	-1	1	1	1	1	1
<sup>513</sup> buffer pointer	DB	DB	DB	DB	DB	DB

## points to data buffer





FIG. 5D

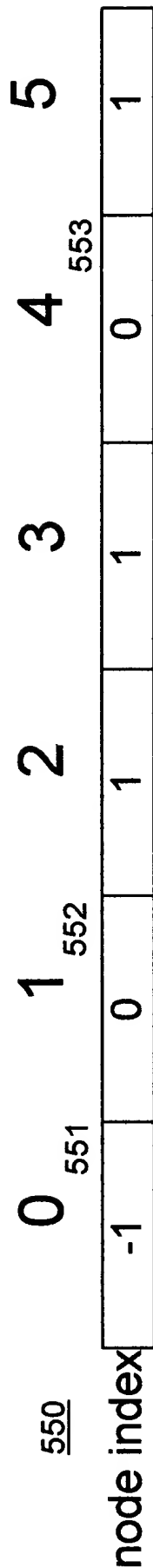


FIG. 5E

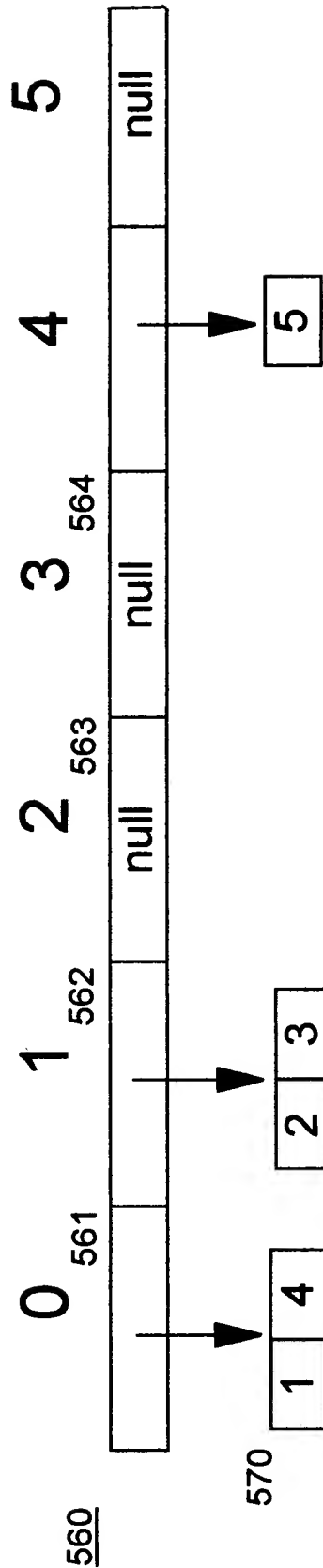


FIG. 6

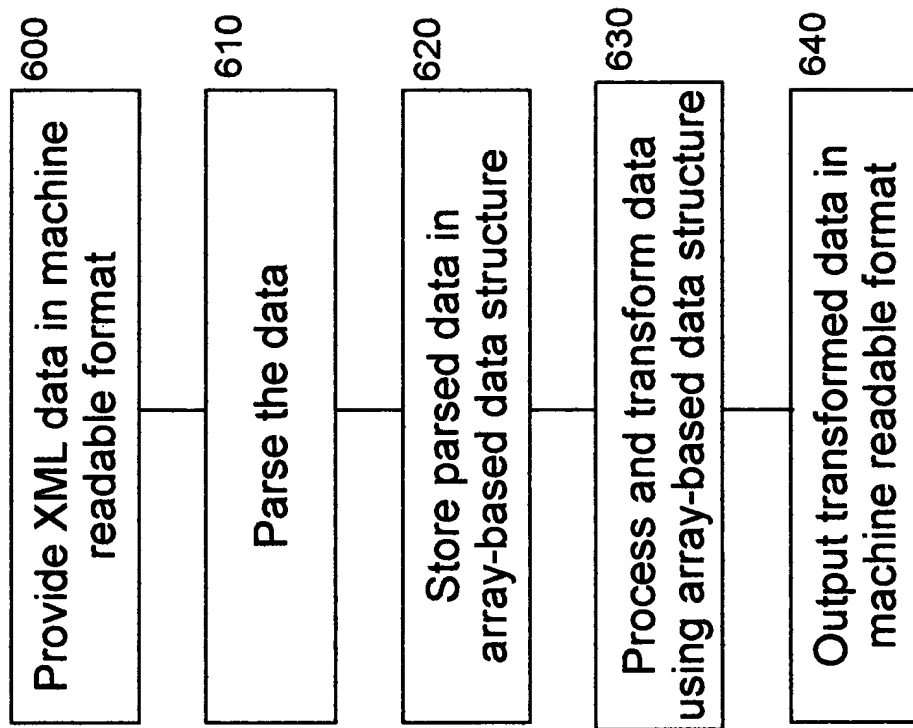


FIG. 7

700

```

705      710
<MAP OPCODE = "RENAME">
  <PARAM> 715
    <SNODE> 720 725      730
      <XMLDATA TAG = "LAST_NAME" />
    </SNODE> 735
  <TNODE> 740 745
    <TAG> SURNAME </TAG>
  </TNODE> 750
  </PARAM>
</MAP>

```

FIG. 8A

FIG. 8A

FIG. 8B

FIG. 8

<!ELEMENT operation (map+)>

<!ATTLIST operation  
name CDATA #IMPLIED>

<!ELEMENT map (param+)>

<!ATTLIST map  
opcode (CDATA) #REQUIRED>

<!ELEMENT param (snode, tnode)>

<!ELEMENT snode (xmldata)>

<!ATTLIST snode  
doc CDATA #IMPLIED  
collatekey CDATA #IMPLIED  
pathback CDATA #IMPLIED>

<!ELEMENT xmldata (xml\_attribute\*)>

<!ATTLIST xmldata  
tag CDATA #IMPLIED  
level CDATA #IMPLIED  
xpathindex CDATA #IMPLIED  
group CDATA #IMPLIED  
invertmatch (true|false) "false">

```

<!ELEMENT xml_attribute (#PCDATA)>
<!-- ATTLIST xml_attribute
    name CDATA #REQUIRED
    value CDATA #IMPLIED
    group CDATA #IMPLIED
    invertmatch (true|false) "false">

```

```

<!ELEMENT tnode (tag?, attribute*, anchor?)>
<!-- ATTLIST tnode
    doc CDATA #IMPLIED
    collatekey CDATA #IMPLIED>

```

```

<!ELEMENT tag (#PCDATA)>

```

```

<!ELEMENT attribute (#PCDATA)>
<!-- ATTLIST attribute
    name CDATA #REQUIRED
    value CDATA #REQUIRED>

```

```

<!ELEMENT anchor (xmldata)>
<!-- ATTLIST anchor
    rel CDATA #IMPLIED
    place CDATA #IMPLIED>

```

0  
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8  
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C  
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x  
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z  
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|  
}  
~

900

```

<Operations>
  <operation name="splitOrders">905
    <map opcode="DELETE">910
      <param>
        <snode>
          <xmldata tag="log" level="4" />915
        </snode>
      </param>
    </map>
    <map opcode="FILTER">920
      <param>
        <snode>
          <xmldata tag="Item" level="4" pathback="2">925
            <xml_attribute name="description" value="tv-19" group="external" />930
            <xml_attribute name="description" value="vcr" group="external" />930
          </xmldata>
        </snode>
        <tnode doc="externalPOs">935
          <tag>Item</tag>
          <anchor rel="PARENT">940
            <xmldata tag="externalPurchaseOrders" level="1" />945
          </anchor>
        </tnode>
      </param>
      <param>
        <snode pathback="1">
          <xmldata tag="POSummary" level="3" />
        </snode>
        <tnode doc="externalPOs" />
      </param>
    </map>
  </operation>
</Operations>

```

FIG. 9A

FIG. 9B

FIG. 9

```

<param>
  <snode>
    <xmldata tag="Item" level="4">
      <xml_attribute name="description" value="tv-19" invertmatch="true" />
      <xml_attribute name="description" value="vcr" invertmatch="true" />
    </xmldata>
  </snode>
  <tnode doc="internalPOs">
    <tag>Item</tag>
    <anchor rel="PARENT">
      <xmldata tag="internalPurchaseOrders" level="1" />
    </anchor>
  </tnode>
</param>
<param>
  <snode pathback="1">
    <xmldata tag="POSummary" level="3" />
  </snode>
  <tnode doc="internalPOs" />
</param>
</map>
</operation>

```

FIG. 10

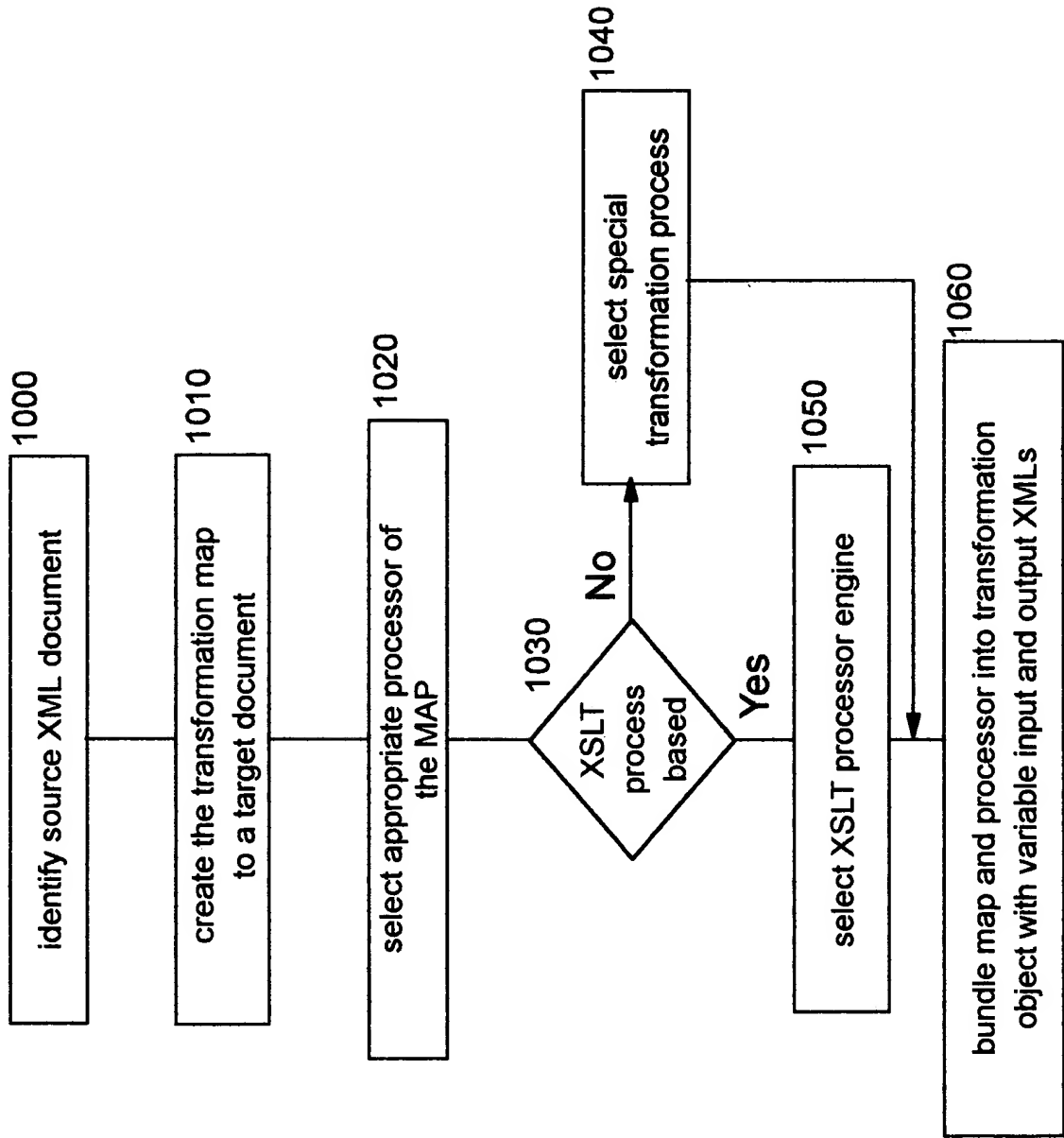




FIG. 11

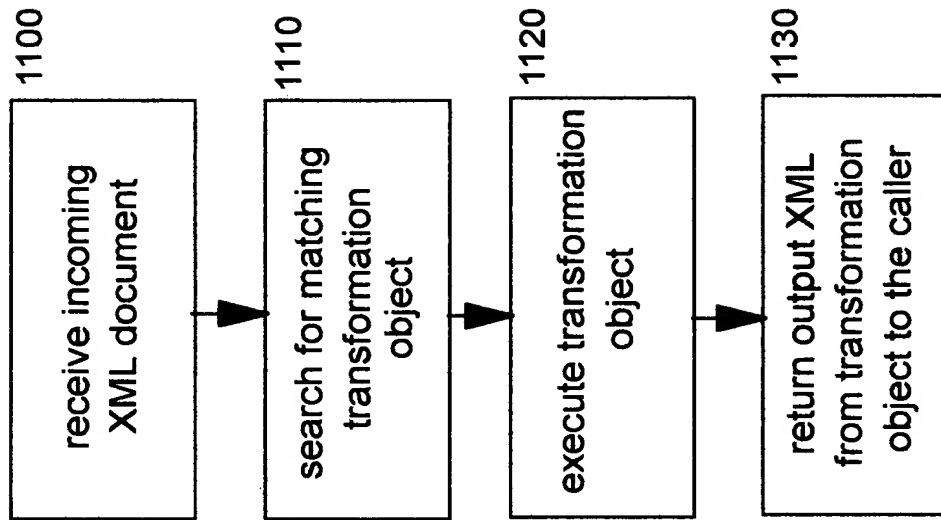


FIG. 12

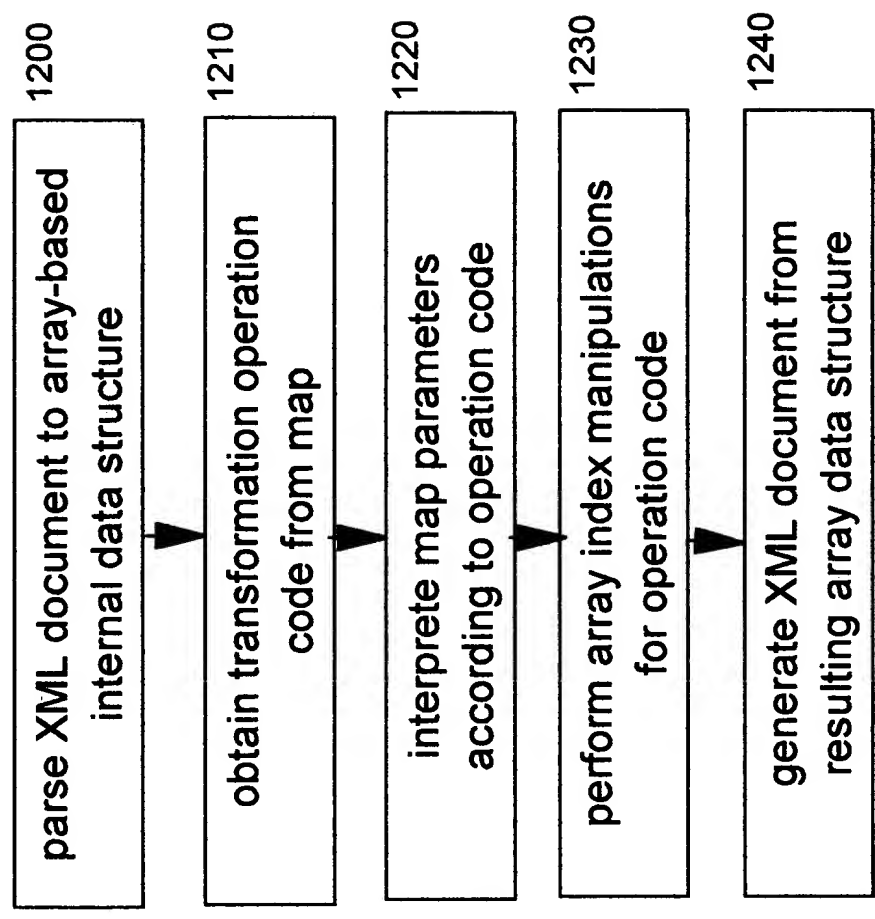


FIG. 13

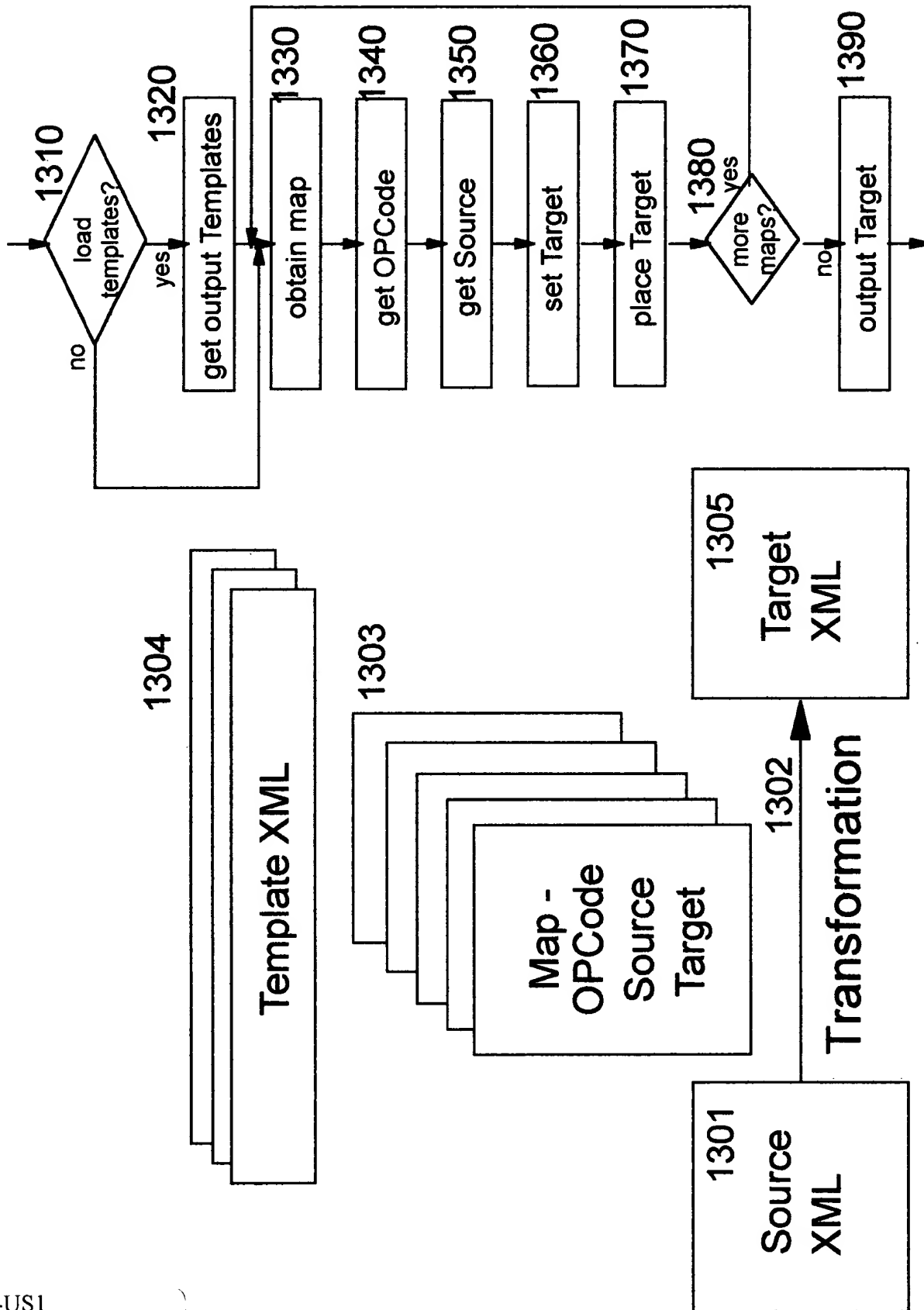


FIG. 14A

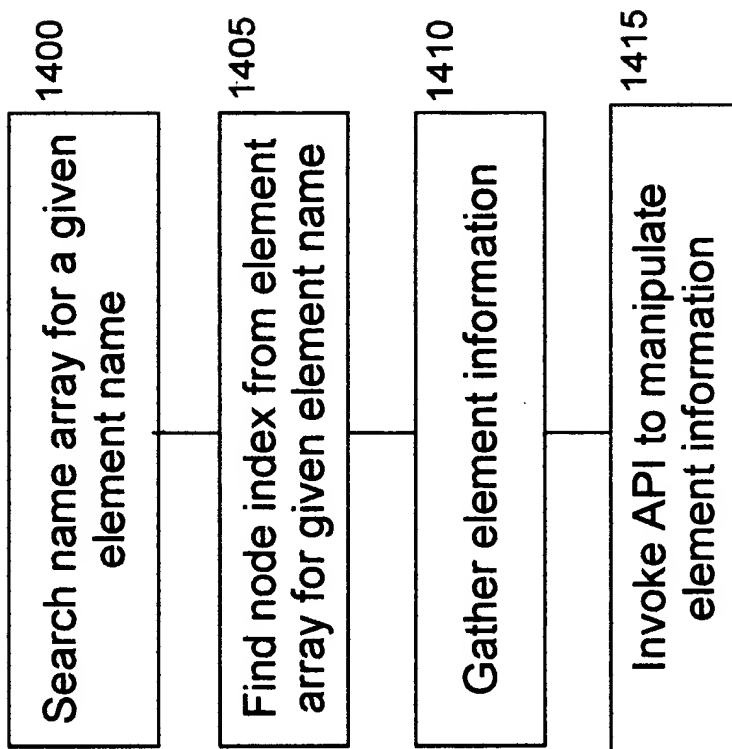


FIG. 14B

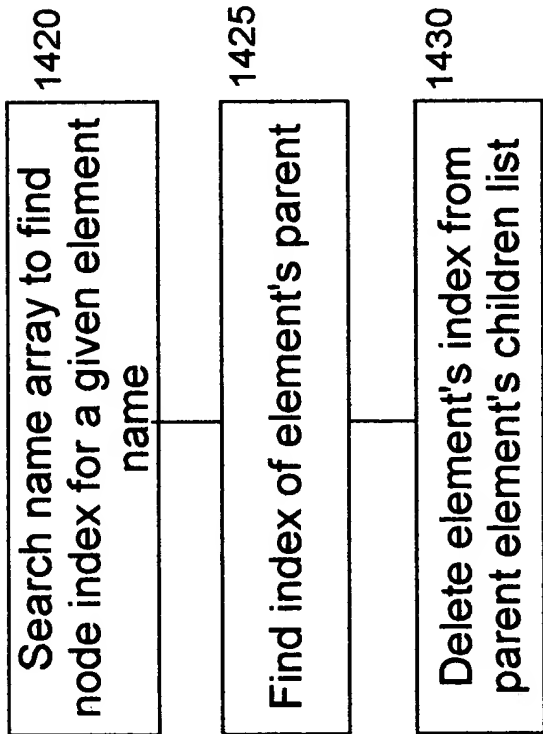


FIG. 14C

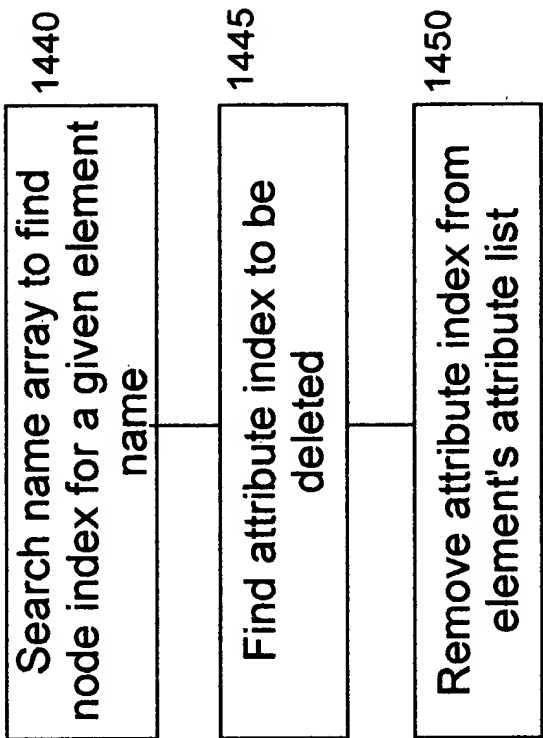


FIG. 15

